Red Oak - Sugar Maple Transition Forest

State Rank: S4 - Secure

Young Red Oak - Sugar Maple Transition Forest. Photo: Beverly Vucson, DFG.

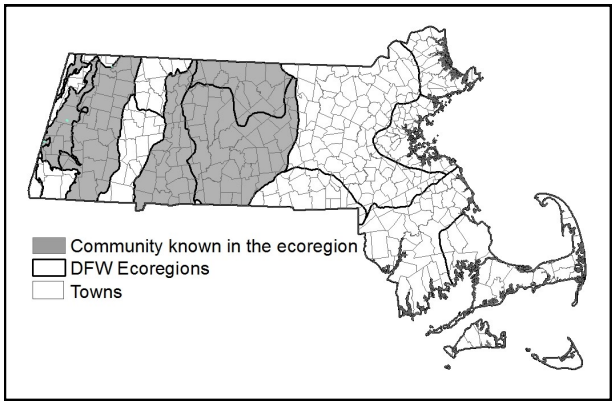
Red Oak - Sugar Maple Transition Forests have species typical of northern hardwood forests mixed with others that are more southerly. This widespread forest type is moderate in moisture, pH, and nutrient availability.

Description: Red Oak - Sugar Maple Transition Forests (ROSMTF) are tall forests with closed, predominantly deciduous canopies with conifers usually providing <20% of the cover. Lower layers have variable density often with scattered individual trees and shrubs; the herbaceous layer is typically sparse. ROSMTF are often on north- to northeast-facing, well drained to moist slopes. The soils are often rocky, somewhat acidic, and of intermediate fertility. Most occurrences are at low to mid elevations, usually under 475m (~1560 ft.).

Characteristic Species: ROSMTF have a closed (>75% cover) canopy dominated by (>~25% cover) of northern red oak, with sugar maple, and variable proportions of beech, black birch, and <20% conifers (white pine and hemlock). White and black oaks, red maple, white ash, and yellow birch are regular minor associates. Shrubs are usually sparse; typical species include striped maple, maple-leaved viburnum, beaked hazelnut, mountain laurel, and witch hazel. The herbaceous layer is often patchy and dominated by ferns such as intermediate wood-fern, Christmas fern, hay-scented fern, and clubmosses. Typical forest species may be present, including wild sarsaparilla, Indian cucumber, Canada mayflower, and whorled wood-aster, with broad-leaved woodland-sedge in the less acidic sites.

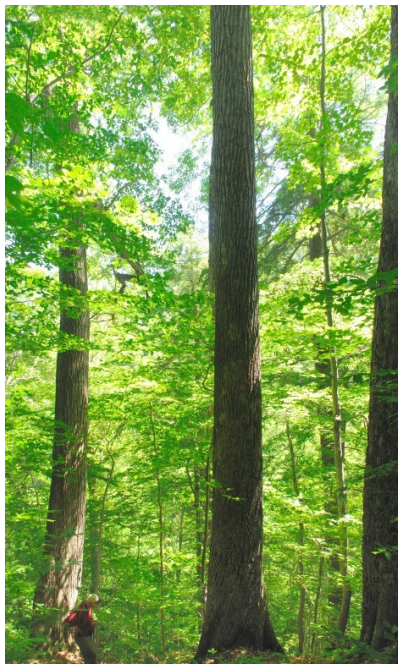
Red oak bark. Photo: Patricia Swain, NHESP.

Differentiating from Related Communities: Red Oak - Sugar Maple Transition Forest is differentiated from Northern Hardwood - Hemlock - White Pine Forest (NHHWPF) by its greater amount of oak and from Oak - Hemlock - White Pine Forest and other oak forests by its greater prominence of northern hardwoods and lack of widespread blueberry family shrubs. Like Rich, Mesic Forest (RMF), ROSMTF is usually in the NHHWPF area or the transition between NHHWPF and the oak dominated forests to the south: RMF lacks oaks and beech, and occasional conifers that are important in ROSMTF. The understory of RMF has dense spring ephemerals and lacks abundant evergreen wood fern, Christmas fern, and wild sarsaparilla found in ROSMTF which may have scattered spring ephemerals. Sugar Maple - Oak - Hickory Forest (SMOHF) includes multiple species of hickories and oaks in more abundance than occur in ROSMTF. They tend to occur to the south and east in the state, but overlap with the distribution of ROSMTF. ROSMTF are more dominated by red oak and appear to be more acidic and less diverse than SMOHF, with undecomposed oak leaves covering the forest floor.



Habitat for Associated Fauna: This widespread forest type provides habitat to many, particularly to opportunistic, animal species. All upland forest types provide valuable structural attributes such as tree cavity den sites (used by a variety of bird and mammal species) and large woody material (used by various amphibian, reptile, and invertebrate species). Large mammals include ROSMTF as parts of their habitat, but are usually more dependent on size of undisturbed forest than on the precise type. White-tailed deer are classic users of ROSMTF, although certainly not limited to it. Fisher use large, older examples. Most of the widespread small mammals would be expected in larger occurrences of the community. Frogs and salamanders breed in vernal pools and other wetlands and use the surrounding forest during the rest of the year.

Examples with Public Access: South Mountain, Pittsfield; Monroe SF, Monroe.



Tall red oaks in Red Oak - Sugar Maple Transition Forest. Photo: Tony Gola.

From: *Classification of Natural Communities of Massachusetts* http://www.mass.gov/nhesp/
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